IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (currently amended) A video editing device ~~for video editing~~ for use with a recording and playing device operable to allow ~~allowing~~ ~~the~~ video material recording and ~~the~~ playback ~~of video material in order to perform~~ and to allow non-linear editing ~~on~~ of the video material, comprising:

frame processing means for retrieving a video frame that is a basic construction unit of the video material from said recording and playing device ~~storing~~ which stores video material to be edited, and for performing frame processing on the retrieved video frame;

control means for controlling said frame processing means such that at least two types of frame processing by said frame processing means are performed upon the retrieved video frame in parallel; and

frame storage means for storing a plurality of ~~the~~ video frames after said frame processing means completes all ~~the~~ frame processing frame-by-frame upon the plurality of video frames, ~~by said frame processing means is completed~~ and for sequentially outputting the plurality of video frames; ~~and~~

~~control means for controlling said frame processing means such that at least some types of frame processing by said frame processing means are performed in parallel and~~

whereby the video frames are output from said frame storage means in ~~realtime~~ real-time.

2. (currently amended) The ~~A~~ video editing device ~~for video editing~~ according to claim 1 wherein

said control means causes frame processing by said frame processing means to be performed in a ~~non-realtime~~ non-real-time manner.

3. (currently amended) The video editing ~~A~~ device ~~for video editing~~ according to claim 1, wherein[[:]] said frame processing means comprises:

at least one image processing means for performing predetermined image processing on individual video frames;

first storage means interposed between said recording and playing device and said frame processing means; and

second storage means interposed between each of a plurality of said frame processing means; ~~and~~

with said control means

~~controls~~ controlling said recording and playing device, said first and second storage means, and each of the frame processing means such that at least two types of ~~exchange~~ processing of video frames between

said recording and playing device,

said first storage means,

said second storage means, ~~and~~

~~each of said frame processing means,~~ and

image processing on video frames in each of said image processing means are performed in parallel, and

further ~~controls~~ controlling said frame storage means such that the plurality of video frames, stored in said frame storage means in no special order, are output in a predetermined order.

4. (currently amended) The video editing ~~A~~ device ~~for video editing~~ according to claim 1, further comprising

input means for inputting an editing schedule along a time axis;

~~and~~ with said control means ~~creates~~ creating processing management data representing a dependency relationship between the kind of frame processing performed on each video frame and each frame processing based on the editing schedule input through said input means, and

~~controlls~~ controlling said frame processing means operable to be executed based on said processing management data.

5. (currently amended) The video editing ~~A~~ device ~~for video editing~~ according to claim 4, wherein said control means[[:]]

stores a plurality of said created processing management data;

selects executable frame processing from said plurality of stored processing management data; and

~~control~~ controls said frame processing means in order to execute said selected frame processing.

6. (currently amended) The video editing ~~A~~ device ~~for video editing~~ according to claim 5, wherein said control means

defers execution of readout processing when said selected executable frame processing is processing for reading out a video frame from said recording and playing device, and

selects a plurality of sequential video frames from video frames to be read out at the time when a plurality of said deferred-execution read-out processing are gathered and then reading out the plurality of selected video frames from said recording and playing device for storage in said first storage means.

7. (currently amended) ~~A~~ The video editing device ~~for video editing~~ according to claim 3, said image processing means comprising:

a first image processing portion constructed by hardware; and

a second image processing portion constructed by software.

8. (currently amended) A video editing method for ~~video editing for~~ using a recording and playing device to allow ~~allowing the~~ video material recording and ~~the~~ playback ~~of video material in order to perform~~ for performing non-linear editing on the video material, comprising the steps of:

~~a frame processing step for~~ retrieving a video frame that is a basic construction unit of the video material from said recording and playing device ~~storing~~ which stores video material to be edited, and for performing frame processing on said retrieved video frame;

controlling said frame processing such that at least two types of frame processing are performed upon the retrieved video frame in parallel; and

~~a frame storage step for~~ storing a plurality of ~~the~~ video frames after said frame processing means completes all ~~the~~ frame processing frame-by-frame upon the plurality of video frames~~by said frame processing step is completed~~; and

~~a frame output step for sequentially~~ outputting sequentially said plurality of stored video frames in real-time [[,]]

~~wherein at least some types of frame processing at said frame processing step are performed in parallel and video frames are output in realtime at said frame output step~~.

9. (currently amended) ~~A~~ The video editing method ~~for video editing~~ according to claim 8 wherein

frame processing at said frame processing step is performed in a non-~~realtime~~real-time manner.

10. (currently amended) ~~A~~ The video editing method ~~for video editing~~ according to claim 8, wherein[[;]]

first and second storage means which can store video frames are used;

said frame processing step comprises:

at least one image processing step for performing predetermined image processing on individual video frames;

a first writing step for reading out video frames from said recording and playing device and then writing them in said first storage means;

a first read-out step for reading out video frames from said first storage means and then providing them to any of image processing steps;

a second writing step for reading out video frames processed at said frame processing step and then writing them in said second storage means; and

a second read-out step for reading out video frames from said second storage means and then providing them in any of the image processing steps, and at least two types of frame processing performed at said first and second writing steps, said first and second read-out steps, and said image processing steps are performed in parallel, and the plurality of the video frames stored at said frame storage step in no special order are output in a predetermined order at said frame output step.

11. (currently amended) ~~A~~ The video editing method ~~for video editing~~ according to claim 8, further comprising:

an input step for inputting an editing schedule along a time axis; and

a step for creating processing management data representing a dependency relationship between the kind of frame processing performed on each video frame and each frame processing based on the editing schedule input in said input step,

wherein said frame processing step is executed based on said processing management data.

12. (currently amended) ~~A~~ The video editing method ~~for video editing~~ according to claim 11, further comprising:

a step for storing a plurality of said created processing management data; and

a step for selecting executable frame processing from said plurality of stored management processing data, wherein said selected frame processing is executed at said frame processing step.

13. (currently amended) ~~A~~ The video editing method ~~for video editing~~ according to claim 12, wherein said frame processing step comprises the steps of:

deferring execution of readout processing when said selected executable frame processing is processing for reading out a video frame from said recording and playing device;

selecting a plurality of sequential video frames from video frames to be read out at the time when a plurality of said deferred-execution read-out processing are gathered; and

reading out the plurality of selected video frames from said recording and playing device.

14. (currently amended) ~~A~~ The video editing method ~~for video editing~~ according to claim 10, wherein

said image processing step comprises ~~the steps of:~~ performing image processing by using hardware; and

performing image processing by using software.

15. (currently amended) A video editing system ~~for video editing~~ for performing non-linear editing ~~on~~ of video material, comprising:

a recording and playing device operable to allow ~~allowing the~~ video material recording and ~~the~~ playback ~~of the video material~~;

frame processing means for retrieving a video frame that is a basic construction unit of the video material from said recording and playing device, and for performing frame processing on the retrieved video frame;

control means for controlling said frame processing means such that at least two types of frame processing by said frame processing means are performed upon the retrieved video frame in parallel; and

frame storage means for storing a plurality of ~~the~~ video frames after said frame processing means completes all ~~the~~ frame processing frame-by-frame upon the plurality of video frames, ~~by said frame processing means is completed~~ and for sequentially outputting the plurality of video frames; ~~and~~

~~control means for controlling said frame processing means such that at least some types of frame processing by said frame processing means are performed in parallel and~~

wherein video frames are output from said frame storage means in ~~realtime~~ real-time.

16. (currently amended) A video editing method for ~~video editing for~~ editing source video data recorded on a recording medium, comprising the steps of:

playing said source video data in frames and performing frame processing on said played frame video data;

storing the frame video data on which said frame processing is completely performed and outputting said stored frame video data as output video data; and

controlling said frame processing such that each frame of said output video data is ~~realtime~~ real-time video data;

wherein at least two types of frame processing are performed in parallel on a frame-by-frame basis upon a single played video frame.